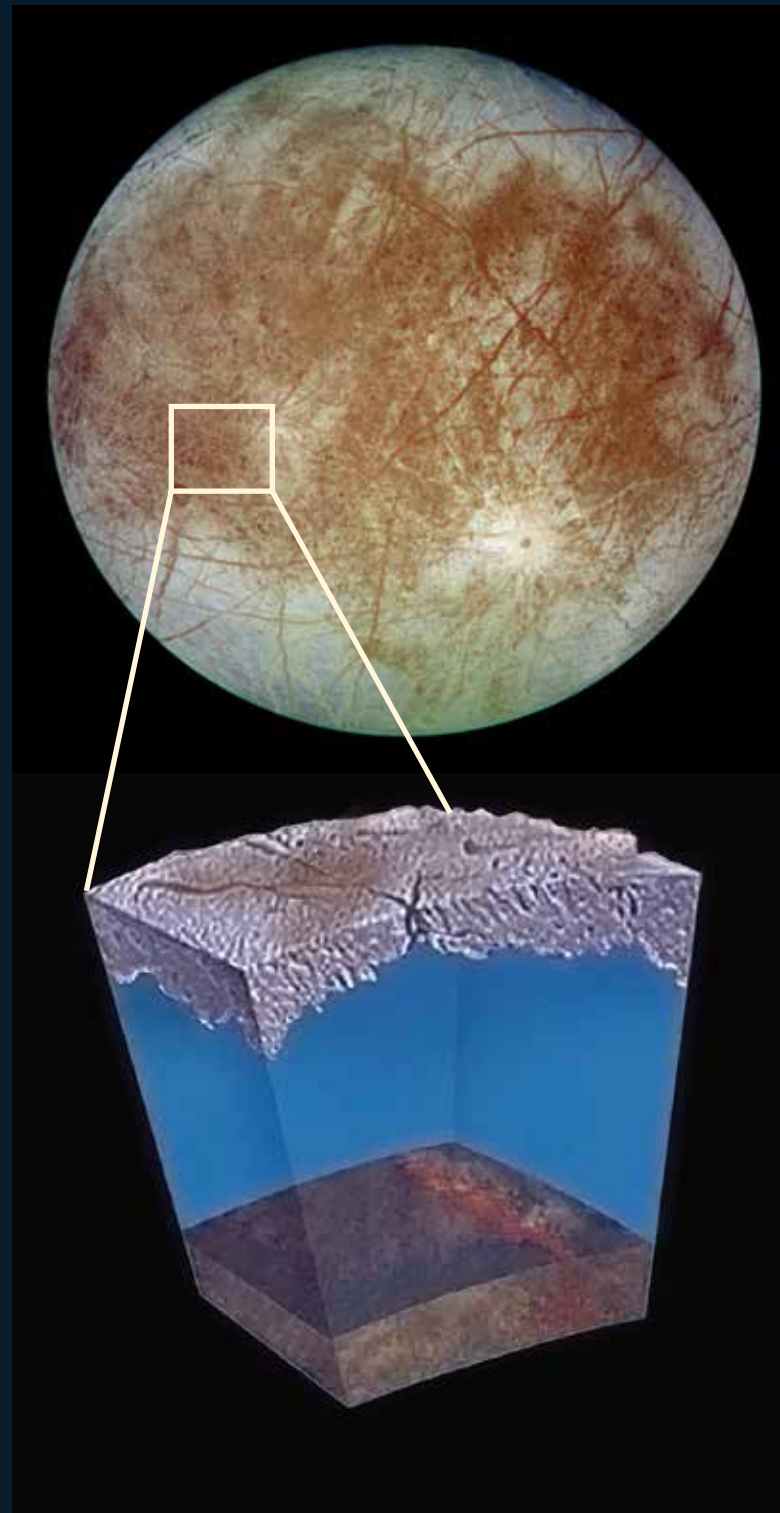


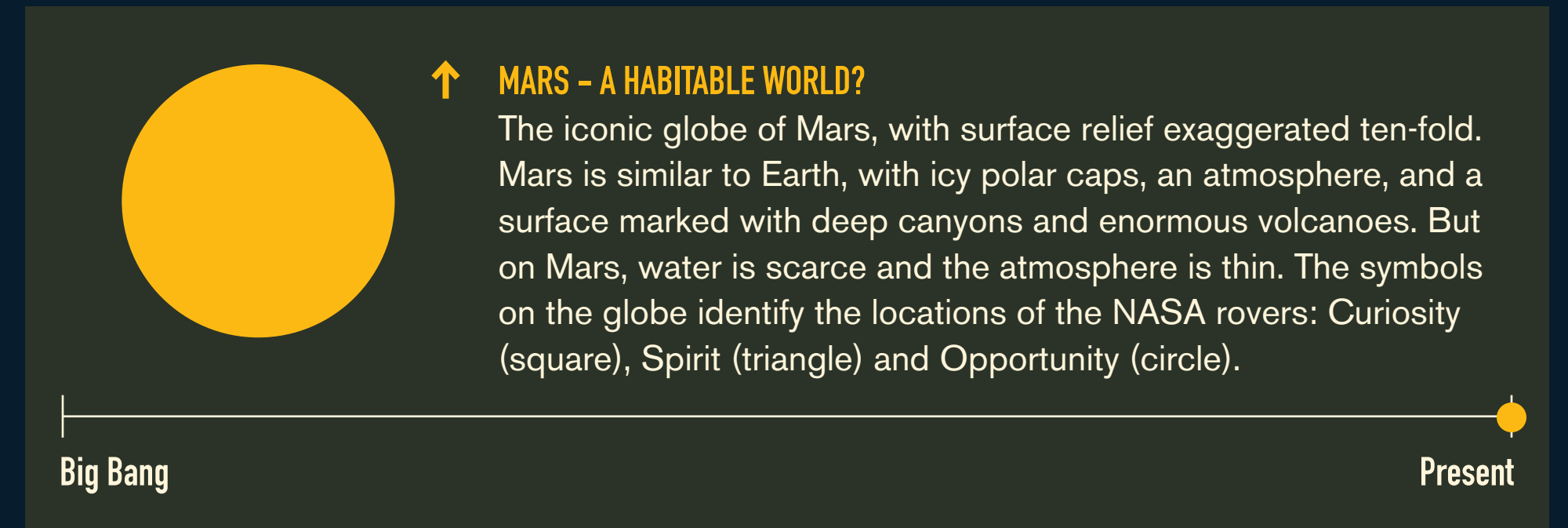
STATION 09 > Search for Life in the Solar System



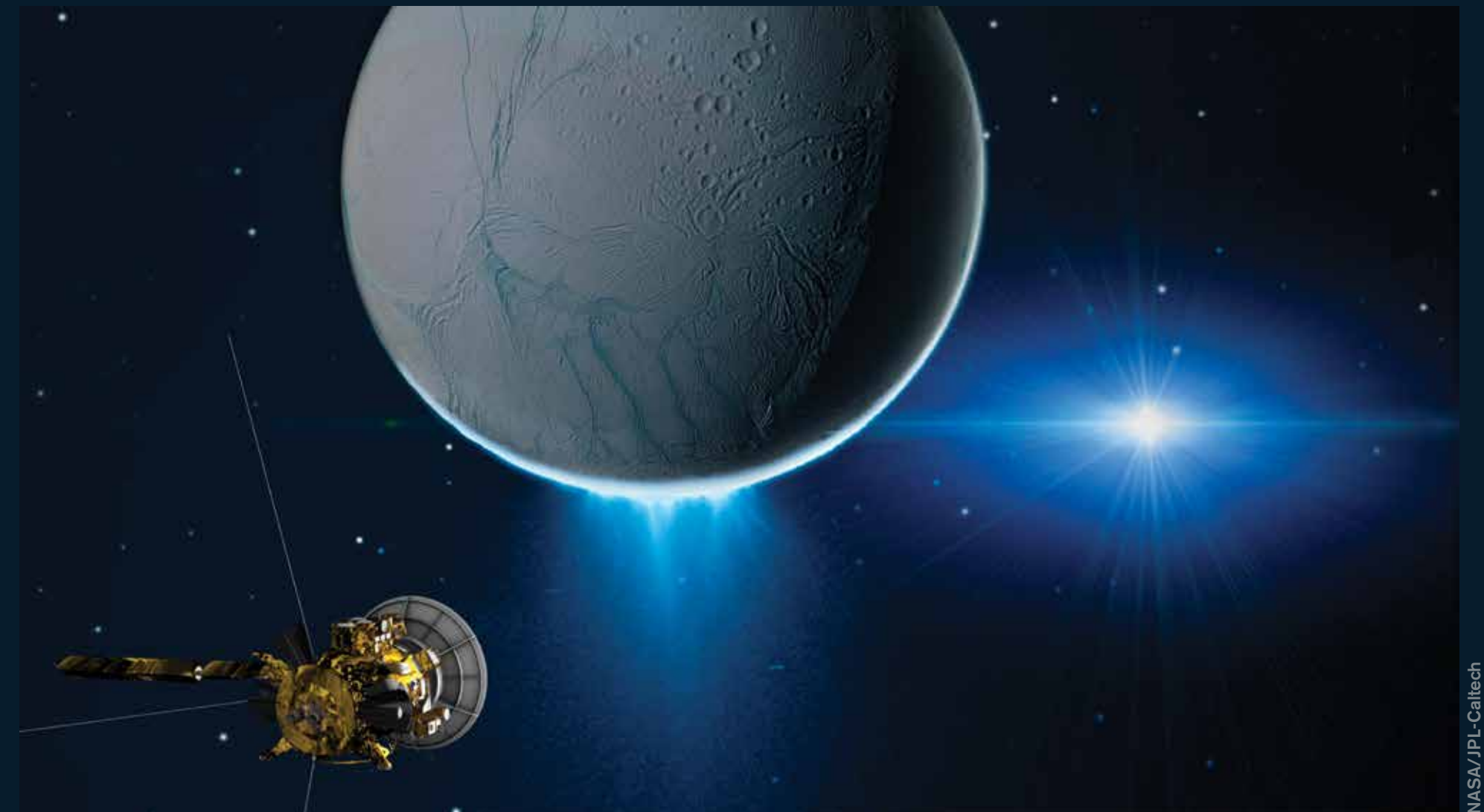
NASA/JPL-Caltech

HIDDEN OCEANS ON ICY WORLDS: The thick icy crust of Europa, a moon of Jupiter, hides a deep ocean. Scientists hope to penetrate the crust with a powerful “melt probe” and reach the subsurface ocean. Underwater, a “hydrobot” would collect information and send it to Earth.

What type of life do we expect beyond our planet? Most of Earth’s life is microbial and is found in our oceans. Several moons in our Solar System contain deep oceans and have strong potential for habitability. Life could exist in these subsurface oceans, perhaps in an environment similar to Earth’s deep-ocean hydrothermal vents or the Antarctic subglacial Lake Vostok.



A Subsurface Ocean and Water Plumes



NASA/JPL-Caltech

SATURN'S MYSTERIOUS MOON, ENCELADUS: In 2005, scientists using NASA-ESA's Cassini spacecraft detected plumes of water vapor and organic gases above Enceladus' south pole, suggesting that a deep liquid ocean lies beneath its icy surface. The Goddard-built and -managed infrared spectrometer on Cassini discovered warm temperatures in the vents that release these plumes.